

### Amendments to the Claims:

The following listing will replace all prior listing of claims in the application.

### Listing of Claims:

1. (Currently amended) A method of fabricating a thin layer, in which a weak buried region is created by implanting a chemical species in a substrate (1) in order to thereafter ~~to be able to initiate a fracture of said substrate (1) along said weak region in order to detach said thin layer (6) therefrom, said method being characterized in that it includes the following steps comprising:~~

- a) ~~a "main" implantation of a "main"~~ implanting a first chemical species (4) in the substrate (1) at a "main" first depth (5);<sub>i</sub> and
- b) ~~at least one "secondary" implantation of at least one "secondary"~~ implanting at least one second chemical species (2) ~~less effective than the main species (4) at weakening the substrate (1), in the substrate (1) at a "secondary" second depth (3) different from said main first depth (5) and at a concentration higher than the concentration of the main said first chemical species (4),~~

wherein said at least one second chemical species is less effective than said first chemical species at weakening the substrate, and

~~wherein said steps a) and b) can be executed in either order, and in that it further includes the following steps:~~

- c) ~~migration of~~ diffusing at least a portion of said secondary at least one second chemical species from said second depth (2) up to the neighborhood vicinity of said first the main depth (5), and
- d) ~~initiation of~~ initiating said fracture along the main said first depth (5).

2. (Currently amended) A fabrication method according to claim 1, ~~characterized in that~~ wherein said secondary second depth (3) is greater than said main first depth (5).

3. (Currently amended) A fabrication method according to claim 1, ~~characterized in that~~ wherein said ~~secondary~~ second depth (3) is less than said ~~main~~ first depth (5).

4. (Currently amended) A fabrication method according to claim 2 ~~or claim 3~~, ~~characterized in that said~~ wherein implanting at least one ~~secondary implantation~~ second chemical species is carried out before implanting said ~~main implantation~~ first chemical species.

5. (Currently amended) A fabrication method according to ~~any one of claims~~ claim 1 to 4, ~~characterized in that~~ wherein said ~~step e)~~ diffusing at least a portion of said second chemical species is ~~encouraged by appropriate~~ further comprises applying a heat treatment.

6. (Currently amended) A fabrication method according to ~~according to any one of claims~~ claim 1 to 5, ~~characterized in that~~ wherein said ~~step d)~~ is carried out with initiating said fracture further comprises applying ~~the aid of an appropriate~~ a heat treatment.

7. (Currently amended) A fabrication method according to ~~according to claim 5 and claim 6~~, ~~characterized in that~~ wherein steps c) and d) are carried out ~~during the same heat treatment~~ simultaneously.

8. (Currently amended) A fabrication method according to ~~according to any one of claims~~ claim 5 to 7, ~~characterized in that~~ wherein applying said heat treatment is ~~carried out~~ comprises carrying out said heat treatment within a thermal budget lower than that which would be necessary to initiate said fracture in the absence of steps b) and c).

9. (Currently amended) A fabrication method according to ~~any one of claims~~ claim 5 to 7, ~~characterized in that said that~~ wherein a predetermined thermal budget is complied with, ~~if necessary by implanting more of the secondary species (2) than would be necessary to be able to initiate said fracture with a thermal budget higher than said predetermined thermal budget~~ an additional amount of said at least one second

chemical species.

10. (Currently amended) A fabrication method according to ~~any one of claims claim 5 to 9, characterized in that~~ wherein applying said heat treatment comprises one or more of heating in a furnace, ~~and/or local heating, and/or laser heating.~~

11. (Currently amended) A fabrication method according to ~~any one of the preceding claims, characterized in that~~ wherein initiating said step d) fracture includes the application of applying mechanical stresses.

12. (Currently amended) A fabrication method according to claim 11, ~~characterized in that~~ wherein applying said mechanical stresses ~~comprise the use of~~ comprises one or more of applying a jet of fluid, ~~and/or the insertion of~~ inserting a blade into the implanted region, ~~and/or the application of~~ applying traction, applying shear or bending stresses to the substrate, ~~(4) and/or~~ applying acoustic waves.

13. (Currently amended) A fabrication method according to ~~any one of claims claim 1 to 12, characterized in that~~ wherein, before or during step d) initiating said fracture, a thickener is applied to the said substrate ~~(4)~~ to serve as a support for said thin layer ~~(6)~~ after its separation said fracture of said thin layer from the said substrate ~~(4)~~.

14. (Currently amended) A fabrication method according to ~~any one of claims claim 1 to 12, characterized in that~~ wherein, before or during step d), a initiating said fracture, a "handle" support is applied to the said substrate ~~(4)~~, after which the said thin layer ~~(6)~~ is transferred onto a final support.

15. (Currently amended) A fabrication method according to ~~any one of the preceding claims, characterized in that the main~~ claim 1 wherein said first chemical species ~~(4) consists of~~ comprises ~~0 hydrogen ions or atoms.~~

16. (Currently amended) A fabrication method according to ~~any one of the preceding claims, characterized in that the secondary~~ claim 1, wherein said at least one chemical species ~~(2) comprise(s) ions or atoms of~~ comprises at least one rare gas.

17. (Currently amended) A thin layer ~~(6), characterized in that it has been~~ fabricated by a method according to ~~any one of claims 1 to 16~~ claim 1.

18. (Currently amended) A thin layer (6) according to claim 17, ~~characterized in that it has been transferred onto~~ further comprising one of a flexible or rigid support underlying said thin layer.

19. (New) A fabrication method according to claim 3, wherein implanting at least one second chemical species is carried out before implanting said first chemical species.

20. (New) A fabrication method according to according to claim 6, wherein steps c) and d) are carried out simultaneously.

21. (New) A fabrication method according to according to claim 6, wherein applying said heat treatment comprises carrying out said heat treatment within a thermal budget lower than that which would be necessary to initiate said fracture in the absence of steps b) and c).

22. (New) A fabrication method according to according to claim 7, wherein applying said heat treatment comprises carrying out said heat treatment within a thermal budget lower than that which would be necessary to initiate said fracture in the absence of steps b) and c).